

15th to 26th; South Pacific coast region, 2nd to 28th, 30th. Stations in the Southern states report the occurrence of damaging frosts as follows: *North Carolina*: Wilmington, 25th, first killing frost of season, weather intensely cold, thermometer falling to 26°. Highlands, 3rd, first killing frost of season. Charlotte, 4th, first killing frost of season. *South Carolina*: Sumter, 25th, very heavy and damaging. Darlington, 25th, very heavy. Charleston, 25th, very heavy and damaging; all delicate plants left in the open air appeared as if scalded; 26th, killing frost. *Georgia*: Augusta, 24th, vegetation completely destroyed, ground froze hard and thick ice formed in places. Quitman, 25th, ice formed; vines killed. *Florida*: Pensacola, 4th, first frost of season. Mayport, 25th, first light frost of season. *Alabama*: Montgomery, 26th, first killing frost of season. Mobile, 25th, killing frost. *Mississippi*: Natchez, 4th, very heavy and destructive. *Louisiana*: New Orleans, 25th, first killing frost of the season; this damaging frost extended over nearly the whole of the state. *Texas*: Paris, 3rd, very heavy frost, seriously damaging the cotton crop; first killing frost of the season. El Paso, 10th, first killing frost of the season. Concho, 25th, killing vegetation. Uvalde, 25th, killing vegetation. Brackettville, 25th, killing vegetation. *Indian Territory*: Ft. Gibson, 20th, killing vegetation.

Ice.—Regarding its formation in the northern sections, this subject is considered elsewhere in the REVIEW under the head of *Ice in Rivers and Harbors*. The following are exceptional cases of ice formation in the southern portions of the country. *Arkansas*: Little Rock, 3d, 24th, 26th. *Louisiana*: New Orleans, 25th, thin ice formed on quiet water. Reports from the sugar districts say that the eyes of the cane have been killed by the hard freeze. *Maryland*: Fallston, 25th, $\frac{1}{2}$ inch thick. *Mississippi*: Fayette, 24th, $\frac{1}{2}$ inch; 25th, $\frac{1}{2}$ inch. Vicksburg, 24th, first of season. *Alabama*: Montgomery, 24th, first of season; 25th. Mobile, 25th, thick ice in exposed places; 26th. *South Carolina*: Sumter, 25th, first cold day of the season, ice $\frac{1}{2}$ inch thick in the streets. Darlington, 25th, "plenty of ice." Charleston, 25th, large quantities of ice formed in all parts of the city and remained unmelted until 10 a. m. Stateburg, 4th; 25th, $\frac{1}{2}$ inch thick. *North Carolina*: Wilmington, 25th, ice in exposed places $\frac{1}{2}$ inch thick. Lenoir, 16th, 17th. Weldon, 16th, first of season. *Tennessee*: Ashwood, 16th. Austin, 20th. *Texas*: Austin, 25th. Clarksville, 20th; 24th, $\frac{1}{4}$ to $\frac{3}{8}$ inch thick. McKavett, 24th, $\frac{1}{4}$ inch; 25th. Fort Griffin, 19th. Brackettville, 25th, $\frac{1}{2}$ inch, first of season. Denison, 24th. Cuero and Victoria, 24th; 25th, in exposed places. *Virginia*: Johnstown, 16th. *Indian Territory*: Fort Sill, 19th, $\frac{1}{2}$ inch, first of season. Fort Gibson, 20th, 1 inch.

PRECIPITATION.

The general distribution of rain-fall for the month of November, 1881, is shown on chart No. III from the reports of over 500 stations. From the table in the left-hand corner of the chart is obtained a monthly average for each of the various districts, determined from the records of Signal Service stations, added to which is a comparison of the present month with such averages for several years. A comparative examination of the rain-fall chart reveals the existence of a large area of excess embraced by the parallels of 30° and 48° N., and the meridians of 77° and 100° W. Within this extensive region the departures of excess range in the extremes from 0.35 inch in the South Atlantic states to 2.56 inches in the Lower Missouri valley. Excepting the South Atlantic states there is a continuous area of deficiency along the Atlantic coast from Florida peninsula northeastward to the Canadian Maritime provinces. On the Pacific coast there is an unbroken area of deficiency from Lower California northward to British Columbia, the departures ranging from 0.52 inch in the Middle Pacific coast region to 1.54 inches in North Pacific coast region. As a means of interesting comparison, the following maximum departures from the average are given for each year since 1872, together with the corresponding districts: 1873, large deficiency, Lower Missouri valley; 1874, +2.88 inches, North Pacific coast region and -2.00 inches Western Gulf states; 1875, +5.40 inches, Middle and North Pacific coast regions and +2.05 inches, Ohio valley and Tennessee; 1876, -2.00 inches, Ohio valley and Tennessee; 1877, +2.88 inches, Middle Atlantic states and +2.23 inches, Upper Lake region; 1878 +2.64 inches, St. Lawrence valley and -2.00 inches, Middle and North Pacific coast regions; 1879, +3.32 inches Lower Missouri valley and +2.65 inches Upper Mississippi valley; 1880, -5.33 inches, North Pacific coast region and +3.38 inches, Western Gulf states.

Deviations from Average Precipitation.—Under this heading departures exhibited by the reports from the regular Signal Service stations are shown in the table of comparative monthly rain-falls in the lower left hand corner of chart No. III. The following items of importance in connection with this subject are reported by voluntary observers: *Illinois*: Riley, monthly rain-fall 0.46 inch above the average for the past 20 years; autumn of the present year, wettest ever recorded, the total precipitation being 6.96 inches more than the average of this season for the past 20 years, and 2.83 inches more than the maximum for that period which occurred in 1868. *Kansas*: Lawrence, monthly rain-fall 0.49 inch above the average for the past 13 years. Yates Centre, monthly rain-fall 0.60 inch above that of 1880. Wellington, monthly rain-fall 1.11 inches above the average of the past two years. *Maine*: Gardiner, monthly rain-fall 1.19 inches below

the average of the past 45 years. *Maryland*: Fallston, monthly rain-fall 0.75 inch below the average for the past 10 years. *Massachusetts*: Worcester, monthly rain-fall 0.10 inch above that for 1880. *Missouri*: St. Louis, Missouri Weather Service reports monthly rain-fall 6.32 or 3.37 inches above the average of past 45 years; this rain-fall has been exceeded but three times since 1839, viz: in 1847, 1869 and 1876, when the November rain-falls were 8.63, 7.48, and 11.55 inches respectively. *New Hampshire*: Contoocookville, rain-fall slightly below the average of past 10 years. *New Jersey*: monthly rain-fall 3.07 inches or 0.70 below the average for past 38 years; this monthly rain-fall has been exceeded in 22 of the preceding 38 years; autumn rain-fall 4.26 inches below the average of this season for the past 38 years; the largest rain-fall, 17.60 occurred in the autumn of 1847; smallest rain-fall 6.01 occurred in the autumn of 1879. The quantity of rain for the autumn of 1881, has been exceeded in every year, at this season, but one (1879) during the past 38 years. *New York*: North Volney, monthly rain-fall, 1.23 inches below the average of the past 9 years; rain-fall for autumn, 2.68 inches below the average for this season for the past 9 years; the autumn of 1881 has been the driest on record. Palermo, monthly rain-fall 2.50 inches below the average of the past 22 years; largest monthly rain-fall, 8.30 inches occurred in 1863; smallest monthly rain-fall, 1.40 inches occurred in 1867. Waterburg, monthly rain-fall 0.23 inch above the average for the past 10 years. *Virginia*: Wytheville, the following report is made by Mr. Howard Shriver, voluntary observer: "rain-fall for November differed little from the average, consequently the amount of rain due for the year, thus far, remains, as at the end of October, deficient."

Special Heavy Rains.—1st, Emmittsburg, Md., 2.94 inches; Pike's Peak, 2.91. 6th, New Orleans, 2.99; Mobile, 4.50 in 10 hours; Pensacola, 3.54; Ft. Barrancas, Fla., 6.07 in 12 hours. 6th and 7th, Green Springs, Ala., 3.07. 7th, Highlands, N. C., 2.50. 7th and 8th, Emmittsburg, Md., 3.80; Elworth, N. C., 3.00. 8th, Mt. Washington, 2.81; Shreveport, 2.50. 9th, Highlands, N. C., 3.10. 11th, Niles, Mich., 2.67; Chicago, 3.18; Vicksburg, 3.52; Pt. Pleasant, La., 4.02. 11th and 12th, Coldwater, Mich., 3.10. 14th, Ft. Gaston, Cal., 2.38. 18th, Springfield, Ill., 2.70; Indianapolis, 4.30; Columbus, 2.81; Champaign, Ill., 2.72; Boonville, Mo., 3.10; Hermann, Mo., 2.70. 19th, College Hill, Ohio, 2.50; Thatcher's Island, Mass., 3.19. 23d, Cape Henry, Va., 2.81.

Largest Monthly Rainfalls.—Mt. Washington, 15.10 inches; Thatcher's Island, Mass., 11.28; Emmittsburg, Md., 11.00; Highlands, N. C., 9.69; Indianapolis, 9.35; Cape Henry, Va., 8.96; Point Pleasant, La., 8.60; Ellsworth, N. C., 8.50; Chamois, Mo., 8.34; Ashwood, Tenn., 8.10; Ft. Barrancas, Fla., 8.09; Ft. Stevens, Or., 7.88; Champaign, Ill., 7.78; Coldwater, Mich., and New Corydon, Ind., 7.42; Mobile, 7.36; Ft. Canby, Wash. T'y., 7.29; Pensacola, Fla., 7.27; New Orleans, La., 7.24; Auburn, N. H., 6.95; Springfield, Ill., 6.93; Portland, Or., 6.91; Niles, Mich., 6.81; Olympia, 6.75; St. Louis, 6.74; St. Charles, Mo., and Mascoutah, Ill., 6.60; Little Rock, 6.50; New Shoreham, R. I., 6.47; Northport, Mich., 6.30; Evansville, Ind., 6.25; O'Fallon, Mo., Anna, Ill., Fayette, Miss., and Lenoir, N. C., 6.10; Vicksburg, 6.07; Jacksonburg, O., 6.05; and Norfolk, 6.04.

Smallest Monthly Rainfalls.—Browns and Tecoma, Nev., Terrace and Kelton, Utah, Maricopa, Wilcox, Yuma and Tucson, Ariz., and Indio, Cal., none; Stockton, Tex., and Ft. Washakie, Wyo., 0.07 inch; Williams and Spadra, Cal., 0.08; Pioche, Wadsworth and Toano, Nev., and Willows, Cal., 0.10; Golconda, Nev., and Campo, Cal., 0.11; San Diego and Newhall, Cal., and Rapid City, Dak., 0.12; Smithville, Dak., 0.14; Ft. Meade, Dak., 0.15; San Fernando, Cal., 0.16; Humboldt, Nev., 0.18; Ft. Wingate, N. M., 0.19; Promontory, Utah, 0.20; Ft. Verde, Ariz., 0.21; Carlin, Nev., and Princeton, Cal., 0.22; Los Angeles, Cal., 0.27; Sumner, Cal., and Terry's Landing, Mont., 0.28; Cheyenne, 0.29; Halleck, Nev., Prescott, Ariz., and Tulare, Cal., 0.30; Borden, Cal., and Ft. Sully, Dak., 0.31; Winnemucca, Nev., and Camp Thomas, Ariz., 0.32; Anaheim, Cal., and Florence, Ariz., 0.34; Bismarck, Dak., 0.35; Phoenix, Ariz., 0.36; North Platte, 0.37; Colton, Cal., 0.38; Ft. Buford, Dak., 0.39; Santa Barbara, Cal., 0.40; Wickenburg, Ariz., 0.41; Delano, Cal., and Ft. Elliott, Tex., 0.42; Ft. Bridger, Wyo., and Ft. Keogh, Mont., 0.44; Huron, Dak., 0.45; Merced and Goshen, Cal., 0.47; Mason, Tex., and St. Vincent, Minn., 0.48; Lordsburg, N. M., 0.49; Otega, Nev., Morriston and Ft. Totten, Dak., El Paso and Concho, Tex., and Geneseo, Ill., 0.50.

Rainy Days.—The number varied in New England from 12 to 26; Middle Atlantic states, 10 to 19; South Atlantic states, 8 to 15; Florida Peninsula, 8 to 19; East Gulf states, 11 to 14; West Gulf states, 6 to 16; Ohio valley and Tennessee, 11 to 16; Lower Lake region, 14 to 24; Upper Lake region, 15 to 24; extreme Northwest, 10 to 17; Upper Mississippi valley, 10 to 18; Missouri valley, 6 to 12; Northern slope, 7 to 15; Middle slope, 5 to 15; Southern slope, 1 to 7; Northern plateau, 7 to 15; Middle plateau, 3 to 11; Southern plateau, 0 to 5; North Pacific coast region, 12 to 18; Middle Pacific coast region, 4 to 6; South Pacific coast region, 0 to 3.

Cloudy Days.—The number varied in New England from 8 to 15; Middle Atlantic states, 7 to 17; South Atlantic states, 5 to 13; Florida Peninsula, 5 to 8; East Gulf states, 9 to 10; Western Gulf states, 6 to 11; Rio Grande valley, 6 to 14; Ohio valley and Tennessee, 6 to 12; Lower Lake region, 13 to 20; Upper Lake region, 10 to 22; extreme Northwest, 6 to 12; Upper Mis-

Mississippi valley, 6 to 15; Missouri valley, 6 to 11; Northern slope, 4 to 11; Middle slope, 2 to 5; Southern slope, 2 to 8; Southern plateau, 0 to 3; Middle plateau, 2 to 8; Northern plateau, 5 to 16; North Pacific coast region, 13 to 22; Middle Pacific coast region, 2 to 3; South Pacific coast region, 0 to 2.

Largest Monthly Snow-falls.—Mt. Washington, about 62.00 inches; Pike's Peak, 47.60; Cisco, Cal., 36.00; Summit, Cal., 30.50; Truckee, Nev., 27.00; Moorehead, Minn., 14.10; Salt Lake City, 14.00; Boca, Nev., 12.00; Helena, Mont., 11.90; Yankton, 8.60; Deadwood, 8.40; Ft. Stevenson, Dak., 8.20; Alta, Cal., 8.00; Ft. Missoula, Mont., 7.90; Corrinne, Utah, 7.00; Ft. Bennett and Ft. Shaw, Dak., 6.90; Ft. Assinaboine, Mont., 5.30; Otega, Nev., 5.00.

Snow.—The dates on which snow fell in the various districts are as follows: New England, 4th to 8th, 10th to 13th, 15th, 16th, 19th to 28th; Middle Atlantic states, 3d, 4th, 12th, 15th, 20th, 23d, 24th, 25th, 27th; Ohio valley and Tennessee, 3d, 4th, 6th, 10th, 14th, 16th, 19th, 20th, 21st, 23rd, 24th, 26th; Lower Lake region, 3d, 4th, 5th, 11th, 12th, 14th, 15th, 18th to 22d, 24th to 28th; Upper Lake region, 1st to 5th, 8th to 27th, 29th, 30th; extreme Northwest, 1st, 2d, 4th, 5th, 7th, 8th, 10th to 18th, 20th, 21st, 22nd, 24th, 25th, 26th, 28th, 30th; Upper Mississippi valley, 2d to 5th, 10th to 15th, 17th to 21st, 23d, 25th, 30th; Missouri valley, 2d, 3d, 8th, 10th to 14th, 16th to 18th, 20th, 23d, 25th, 26th, 29th, 30th; Northern slope, 1st, 2d, 4th to 19th, 21st to 23d, 25th, 28th, 29th, 30th; Middle slope, 1st, 2nd, 3rd, 7th to 14th, 17th to 19th, 23d, 29th, 30th; Southern slope, Coleman City, 19th, and Ft. Elliott, 11th, 17th; Southern plateau, 1st, 6th, 8th, to 11th, 17th, 19th, 20th; Middle plateau, 1st, 2nd, 6th to 13th, 15th to 18th, 28th, 29th; Northern plateau, 7th to 9th, 11th, 13th, 14th, 16th, 17th, 20th, 22nd, 23rd, 25th, 26th, 28th, 30th; North Pacific coast region, Albany, Or., 13th, 14th, and Roseburg, 17th. Cases of particularly heavy snow were reported as follows: Pueblo, Colo., 11th, reports from western Kansas, eastern Colorado and northern New Mexico, show exceedingly heavy snow for past 36 hours; eastward to Crown lake from 6 to 8 inches fell, while from Lojunk westward, 18 to 25 inches were reported; all cuts full and heavy drifts forming rapidly. This was the heaviest snow storm in New Mexico and Colorado, that the Santa Fe railroad has ever encountered. Lincoln, Neb., 10th, violent storm, snow falling at the rate of one inch per hour. Cheboygan, Mich., 4th, six inches fell during the night. Cabot, Vt., 4th, snow fell to the depth of 14 inches. Winnipeg, Manitoba, 17th very heavy snow storms during the past few days; all railway work suspended, trains blockaded, grading contracts closed for the season. Sherman, Wy. 11th blinding snow storm and heavy drifts; overland trains abandoned. Milford, Pa., 23d, very heavy snow throughout Pike county. Jamestown, N. Y., 4th, furious storm all day; twelve inches deep in northern part of county. Portsmouth, N. H., 4th, very heavy storm throughout western portion of State. Friendship, N. Y., 4th, snow fell to a depth of 8 inches. Elsworth, N. C., 16th, mountains covered with snow. 24th, mountains covered with snow, which is blown off in such quantities as to make it appear like a snow storm, although the weather is clear. Dyberry, Pa., 25th, 26th, snow sufficient for sleighing.

Snow from a Cloudless Sky.—Dubuque, 23d from 8.40 to 8.55 p. m. Rochester, 28th, 6.58 a. m., no clouds were visible within 45° of zenith. New Haven, 20th. Lansing, Mich., 13th, 9 p. m.; rain and snow fell from a cloudless sky, lasting fifteen minutes. Bismarek, Dak. 18th.

Depth of Snow on Ground at End of Month.—St Vincent, Minn., 10 inches; Pike's Peak, 6; Denver, 5; Umatilla, Or. and Mt. Washington, 4; Helena, Mont., and Dayton, Wash. 2½; Embarrass, Wis., 2; Escanaba, 1½; Franklin, Wis. and Moorehead, Minn., 1; Mendon, Mass., ¾; Neillsville, Wis. and Alpena, Mich., ¼; Ft. Benton, Mont., Springfield, Mass. and Des Moines, ⅓; Salt Lake City, 1 to 5; Dyberry, Pa., 2 to 3; Marquette, Mich., La Crosse and Madison, Wis., Albany and North Volney, N. Y. and Morrison, Ill., trace.

Sleet.—Sedalia, Mo., 17th, heaviest storm of the kind ever before experienced in this section; shade trees, fences and buildings heavily coated with ice, the first mentioned being greatly damaged; loss to city estimated at \$5000. Springfield, Ill., 17th, trees, telegraph wires and fences covered with a heavy coating of ice; telegraphic communication seriously interrupted. Carrollton, Ill., 17th, trees covered with ice and in many cases badly broken; telegraphic communication seriously interrupted. Boonville, Mo., 17th, unusually heavy storm of sleet causing great damage to orchards and shade trees. Clinton, Ill., 17th, one of the heaviest storms of sleet ever known in this section; great damage to orchards. Independence, Mo., 18th, very heavy and disastrous, followed by snow. Griggsville, Ill., 18th, worst storm of sleet in the past 25 years; the damage to fruit and shade trees was considerable; many trees, six inches in diameter, were snapped off by the weight of the ice. Highlands, N. C., 24th, during morning a frozen mist like sleet covered the forest. Port Huron, 23d, 11.15 a. m., during storm great sheets of sleet swept over the city; continued until 2.10 p. m., when it turned to rain. Northport, Mich., 25th, 3 a. m. accompanied by an exceedingly violent gale causing a great many wrecks on the north shore of Lake Michigan.

Hail.—Near Dry Pond, Jackson county, Ga., 8th, causing great damage to crops, destroying cotton and beating the bark off trees and stumps; five days after the storm hailstones were found

in some places 16 inches deep, many stones being as large as partridge eggs. Fall River, Mass., 15th, greatest fall of hail that has been experienced here for years.

RELATIVE HUMIDITY.

The percentage of mean relative humidity for the month ranges as follows: New England, from 71 to 86; Middle Atlantic states, 66 to 78; South Atlantic states, 71 to 81; Florida peninsula, 74 to 79; East Gulf states, 72 to 78; West Gulf states, 69 to 81; Rio Grande valley, 67 to 83; Ohio valley and Tennessee, 67 to 77; Lower Lake region, 65 to 76; Upper Lake region, 75 to 83; extreme Northwest 69 to 87; Northern slope, 58 to 73; Middle slope, 49 to 76; Southern slope, 52 to 70; Southern plateau, 42 to 61; Middle plateau, 40 to 65; Northern plateau, 69 to 85; North Pacific coast region, 82 to 86; Middle Pacific coast region, 56 to 64; South Pacific coast region, 39 to 61. *High stations* report the following percentages not corrected for altitude: Pike's Peak, 76.2; Denver, 60.2; Cheyenne, 58.2; Mt. Washington, 86.0.

WINDS.

The prevailing winds during the month of November, 1881, at Signal Service stations, are shown on chart No. II, by arrows, which fly with the wind. In the South Atlantic and East Gulf states, *northeasterly*; in the Middle Atlantic states and New England, *northwesterly*; in the Lake region, Tennessee and Ohio valley, *southerly*; in the Upper Mississippi and Missouri valleys, *northwesterly*; in the Western Gulf states, including Texas, *southerly* and *northerly*; in the Rocky Mountain and Plateau regions, *variable*; in the North Pacific coast region, *southerly*; in the Middle and South Pacific coast regions, *north to west*.

Total Movements of the Air.—The following are the largest total movements at Signal Service stations: Mt. Washington, 31,375 miles; Pike's Peak, 17,519; Del. Breakwater, 12,861; Cape May, 12,675; New Shoreham, R. I., 12,501; Wood's Holl, Mass., 12,370; Thatcher's Island, Mass., 11,337; Sandusky, 11,250; Sandy Hook, 11,143; Grand Haven, 11,044; Indianola, 10,886; Erie, 10,538; Kitty Hawk, 10,529; Rochester, 10,338; Port Eads, La., 10,320; Milwaukee, 10,128; Buffalo, 10,114; Madison, Wis., 9,884; Champaign, Ill., 9,808; Cape Henry, Va., 9,712; Hatteras, N. C., 9,611; Portsmouth, N. C., 9,398; Barnegat, N. J., 9,379; Cleveland, 9,283; Alpena, Mich., 9,179; Galveston, 9,178; Port Huron, 9,011; North Platte, 8,927; Key West, 8,828; Moorehead, Minn., 8,810; St. Vincent, Minn., 8,722; St. Louis, 8,618; Omaha, 8,581; Huron, Dak., 8,499; Dodge City, 8,402; Ft. Stevenson, Dak., 8,378; Cheyenne, 8,350; Burlington, Vt., 8,346; Marquette, 8,329; Ft. Sill, Ind. T., 8,323; Detroit, 8,315; Oswego, 8,121; Newport, R. I., 8,099; Toledo, 8,090. The *smallest* are Missoula, Mont., 935; La Mesilla, N. M., 1,082; Lynchburg, 1,378; Phoenix, Ariz., 1,511; Silver City, N. M., 1,526; Visalia, Cal., 1,887; Salt Lake City, 2,205; Uvalde, Tex., 2,325; Augusta, Ga., 2,382; Lewiston, Idaho, 2,390; Spokane, Wash. T., 2,624; Laredo, Tex., 2,645; Red Bluff, 2,858; Boise City, 2,864; Florence, Ariz., 2,934.

High Winds.—On summit of Mt. Washington the following high velocities were reported: 108 miles, NW., 10th; 100 miles, NW., 20th; 98 miles, NW., 9th, 18th; velocities exceeding 50 miles per hour were reported from 2nd to 22d and from 24th to 30th. On summit of Pike's Peak, a maximum velocity of 68 miles was reported as follows: from NE., 11th; SW., 12th, 16th; velocities exceeding 50 miles per hour were reported from 4th to 6th, 11th, 12th, 14th to 16th, 18th, 19th, 24th. Other stations reporting velocities of 50 miles per hour or over are as follows: Ft. Custer, Mont., 53 miles, NW., 12th; North Platte, 50, NW., 4th; Ft. Buford, 50, W., 13th; Bismarck, 50, W., 13th; Indianola, 55, N., 2d; Sandusky, 56, W., 14th; Thatcher's Island, Mass., 56, NW., 11th; Wood's Holl, Mass., 50, NW., 20th; Cape May, maximum velocity, 66, NW., 20th, 52, NW., 4th, 15th, and 55, NW., 24th; Delaware Breakwater, 54, NW., 24th; Cape Henry, Va., 52, NW., 3d, 4th; Kittyhawk, 52, N., 4th.

Local Storms.—Near Fort Ridgely, Minn., 25th, very violent tornado moved from southwest to northeast causing great destruction of property. A large black, funnel-shaped cloud approached rapidly from the west and when near by, the centre of the cloud appeared to change its color to a dirty green and purple; lightning flashed and heavy thunder rolled. While the dark cloud was passing the wind whirled with indescribable rapidity; one man was thrown against a tree and his side smashed; another was carried high in the air and thrown lifeless on the ground, his clothing being entirely stripped from his body. Wild ducks, prairie chickens and domestic fowls were killed in considerable numbers and entirely stripped of feathers; in some instances harness was completely torn from the backs of horses and the animals killed or badly wounded. All houses was in the track of the storm were entirely demolished. Fayette, Miss., 11th, at a point four miles east of station a violent tornado suddenly made its appearance in a gentleman's yard. Every tree was blown down and many were scattered in all directions. In the house, crockery, etc., was broken, but the building, a strong frame, was not injured, the doors and windows being open. An eye witness states that the air was filled with flying timber. The tornado passed off very quickly, and lifted from the ground, doing no other damage for a considerable distance until it again descended